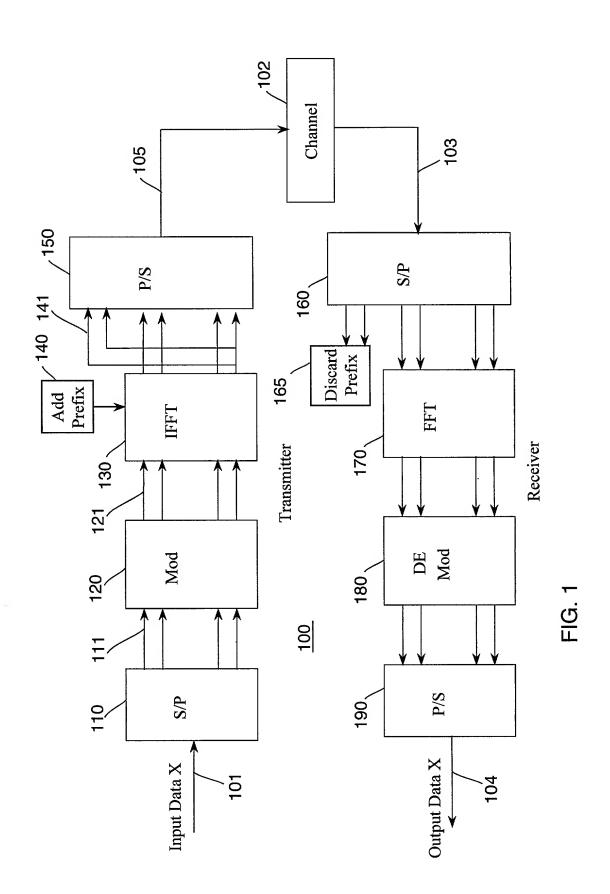
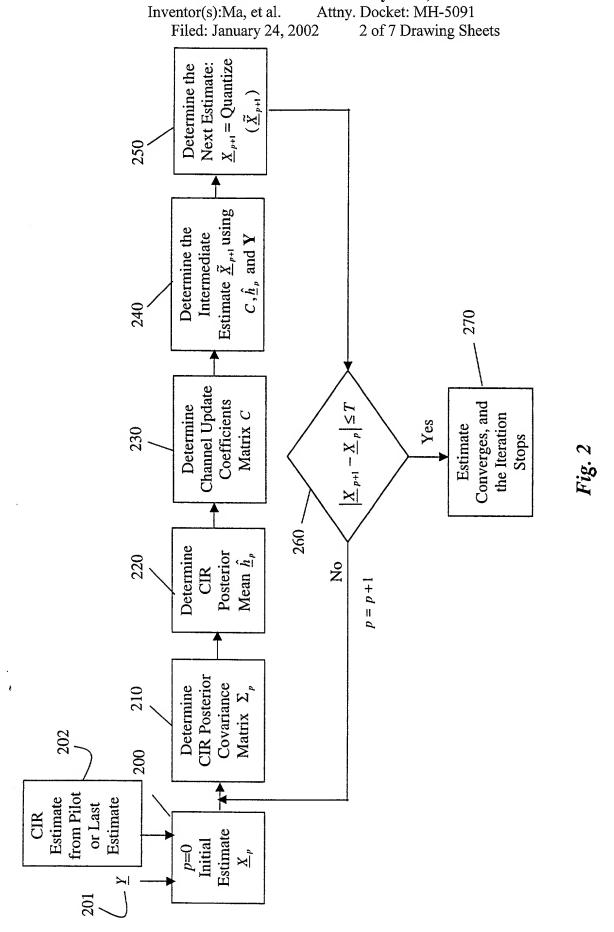
Inventor(s):Ma, et al.

Attny. Docket: MH-5091

Filed: January 24, 2002





Expectation-Maximization-Based Channel Estimation and Signal Detection for

Wireless Communications Systems; Inventor(s):Ma, et al. Attny. Docket: MH-5091 Filed: January 24, 2002 3 of 7 Drawing Sheets $\underline{X}_{p+1} = Quantize$ Determine the Next Estimate: $(\widetilde{\underline{X}}_{p+1})$ 350 Estimate \tilde{X}_{p+1} using Determine the and Y Intermediate C, \hat{h}_{p} 340 370 Channel Update Coefficients Converges, and Determine $\left| \underline{X}_{p+1} - \underline{X}_p \right| \le T$ Matrix C the Iteration Yes Estimate 330 Stops 360 without $E\{h\}$ Determine Posterior Mean \hat{h}_p 320 ^oZ p = p + 1CIR Posterior Σ_p without Σ^{-1} Covariance Determine Matrix 300 from Pilot Estimate Estimate or Last CIR Estimate

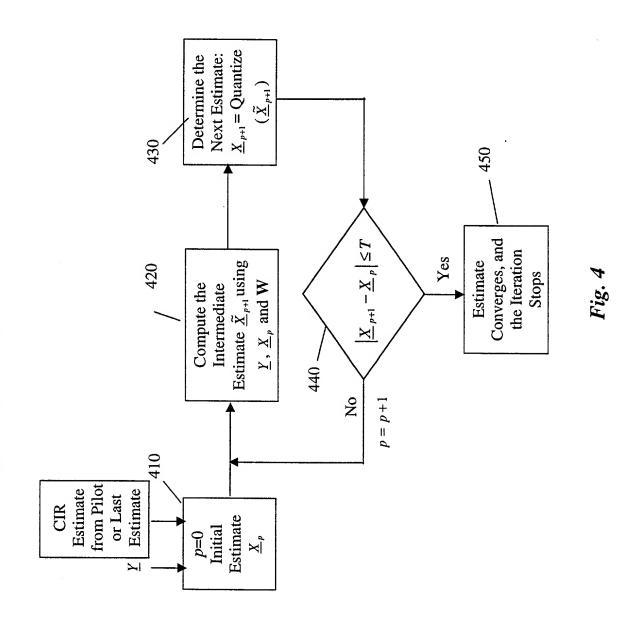
p=0 Initial

 X_{p}

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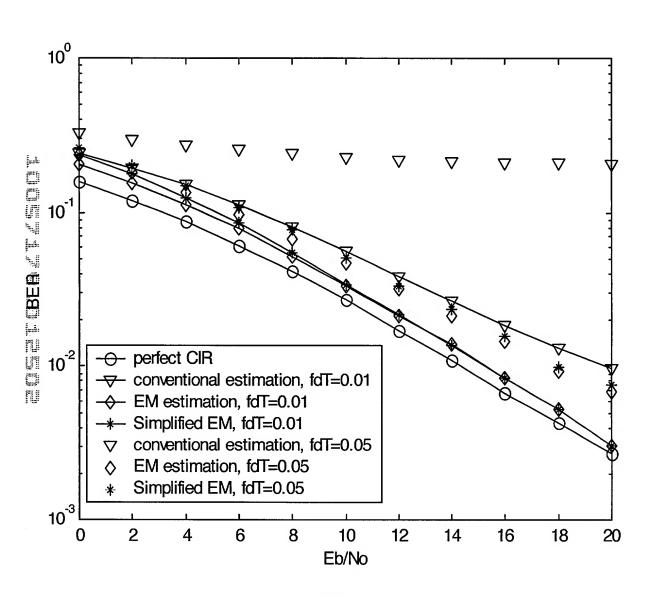


FIG. 5

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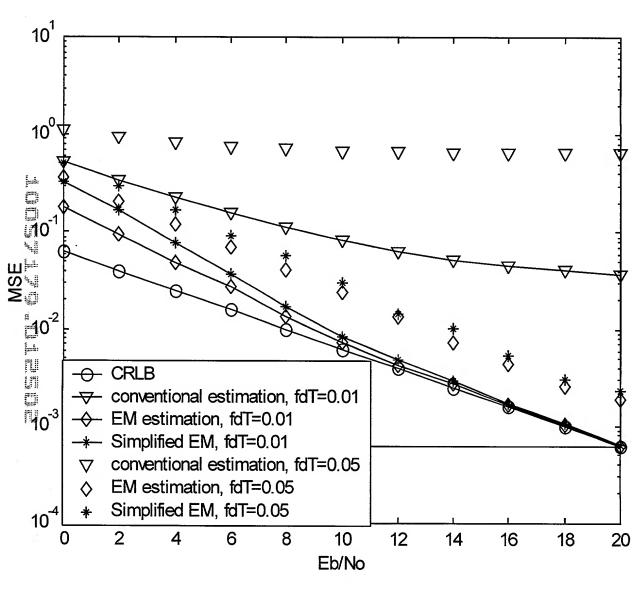


FIG. 6

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Attny. Docket: MH-5091

Filed: January 24, 2002

